

Appl. No 10/725,891
Amdt Dated August 30, 2005
Reply to Office Action of June 3, 2005

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Withdrawn) A method for the ~~detection and~~ quantification of a protein of interest comprising:
immobilizing the protein of interest on a substrate, wherein the protein comprising comprises an epitope and another portion;
contacting the immobilized protein with a labeled ligand that directly binds to the epitope to yield a detectably labeled protein;
directly detecting the labeled ligand that is bound to the detectably labeled protein of interest; and
quantifying the detectably labeled protein.
2. (Withdrawn) The method of claim 1 wherein the labeled ligand is a consists essentially of a fluorophor-conjugated monoclonal or polyclonal antibody.
3. (Withdrawn) The method of claim 2 wherein the quantification step is based solely on the amount of detected fluorescence from the fluorophor-conjugated antibody~~contacting step is not repeated with a second antibody~~.
4. (Withdrawn) The method of claim 2 wherein the protein is a recombinant protein tagged with an amino acid sequence that serves as a recognition site for the labeled antibody.
5. (Cancelled) .
6. (Withdrawn) The method of claim ~~1~~ 2 wherein the detecting step comprises detecting with a phosphor autoradiography imager.
7. (Withdrawn) The method of claim 1 wherein the quantifying step employs an internal standard.
8. (Withdrawn) The method of claim 7 wherein the internal standard is comprises a second protein comprising the said epitope and a second portion, wherein the second portion protein has a different molecular weight than is different from the portion of the protein of interest.
9. (Withdrawn) A method for the detection of a protein comprising:
immobilizing a protein comprising an epitope on a substrate;

Appl. No 10/725,891
Amdt Dated August 30, 2005
Reply to Office Action of June 3, 2005

contacting the immobilized protein with a chromophore-labeled antibody that binds to the epitope to yield a detectably labeled protein; and
detecting the detectably labeled protein with a phosphor autoradiography imager,

wherein the contacting step is not repeated with a second antibody prior to the detecting step.

10. (Withdrawn) The method of claim 9 wherein the protein is a recombinant protein tagged with an amino acid sequence that serves as a recognition site for the labeled antibody.

11. (Withdrawn) The method of claim 9 further comprising the step of quantifying the detected detectably labeled protein.

12. (Withdrawn) The method of claim 9 further comprising simultaneously performing the immobilizing, contacting, and detecting steps on a plurality of proteins for high throughput detection.

13. (Currently Amended) A method for ~~detecting~~quantifying a P450 protein comprising:

providing a recombinant P450 protein comprising an epitope;
contacting the P450 protein with a labeled ligand that directly binds to the epitope to yield a detectably labeled P450 protein; and
directly detecting the labeled ligand that is bound to the detectably labeled P450 protein; and

quantifying the detectably labeled protein.

14. (Cancelled).

15. (Original) The method of claim 13 wherein the epitope is a non-native sequence provided at the amino terminus of the P450 protein.

16. (Currently Amended) The method of claim 15 wherein the epitope comprises the a-FLAG sequence Asp-Tyr-Lys-Asp-Asp-Asp-Lys.

17. (Currently Amended) The method of claim 16 wherein the ligand comprises an a fluorophore-conjugated anti-FLAG M2 monoclonal antibody that binds to said epitope.

18. (Currently Amended) The method of claim 13 wherein the labeled ligand comprises a ~~chromophore~~fluorophore-labeled antibody.

19. (Cancelled).

Appl. No 10/725,891
Amdt Dated August 30, 2005
Reply to Office Action of June 3, 2005

20. (Currently Amended) The method of claim ~~19~~ 18 wherein the detecting step comprises detecting fluorescence using a phosphor autoradiography imager.

21. (Original) The method of claim 13 wherein the recombinant P450 protein is provided in a crude extract.

Claims 22-29. (Cancelled)

30. (New) The method of claim 1 wherein the protein of interest is present at picomolar concentrations.

31. (New) The method of claim 13 wherein the P450 protein is present at picomolar concentrations.